SECTION 8 ISR PROJECT GROUNDWATER PROTECTION

Presented By:
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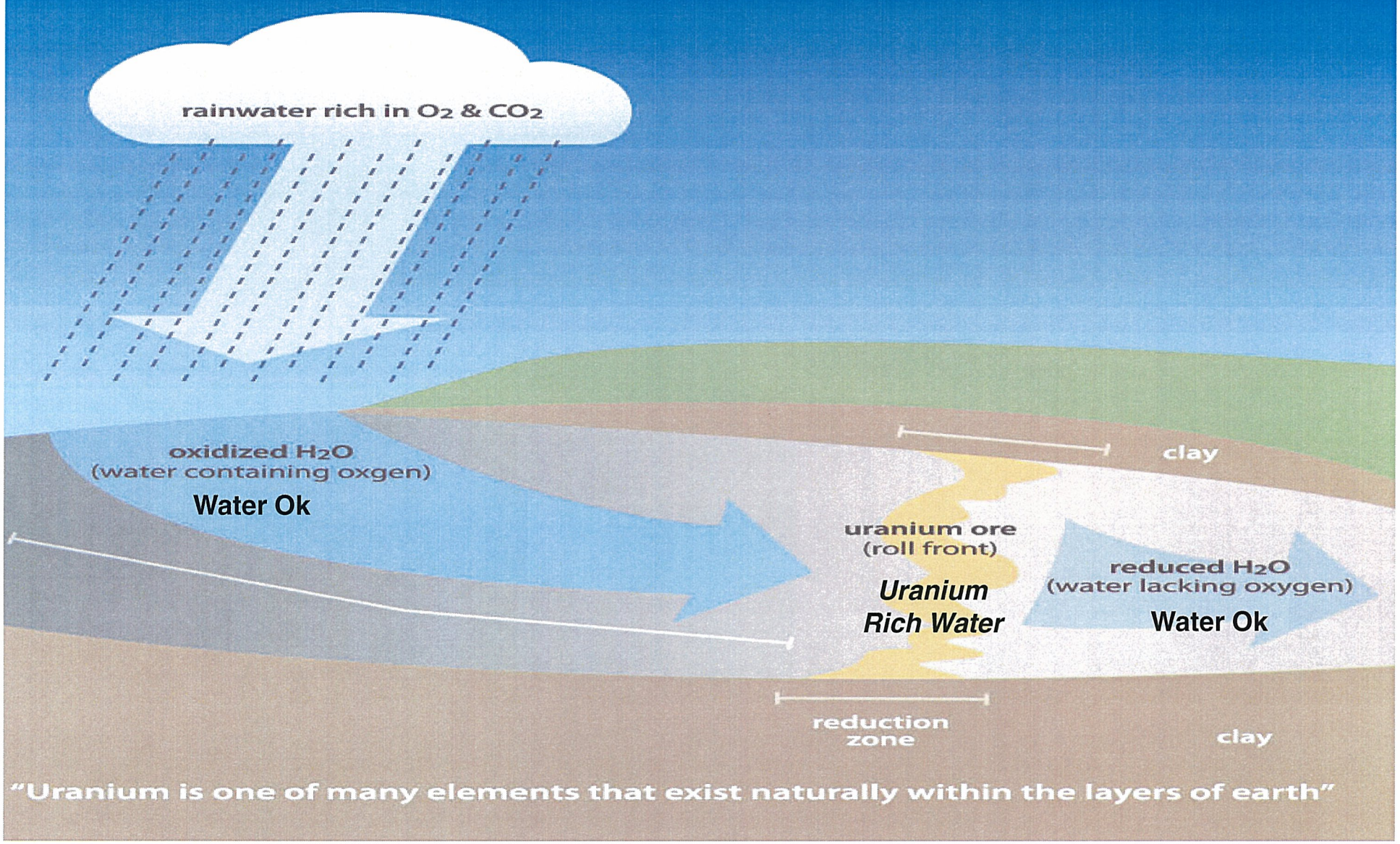
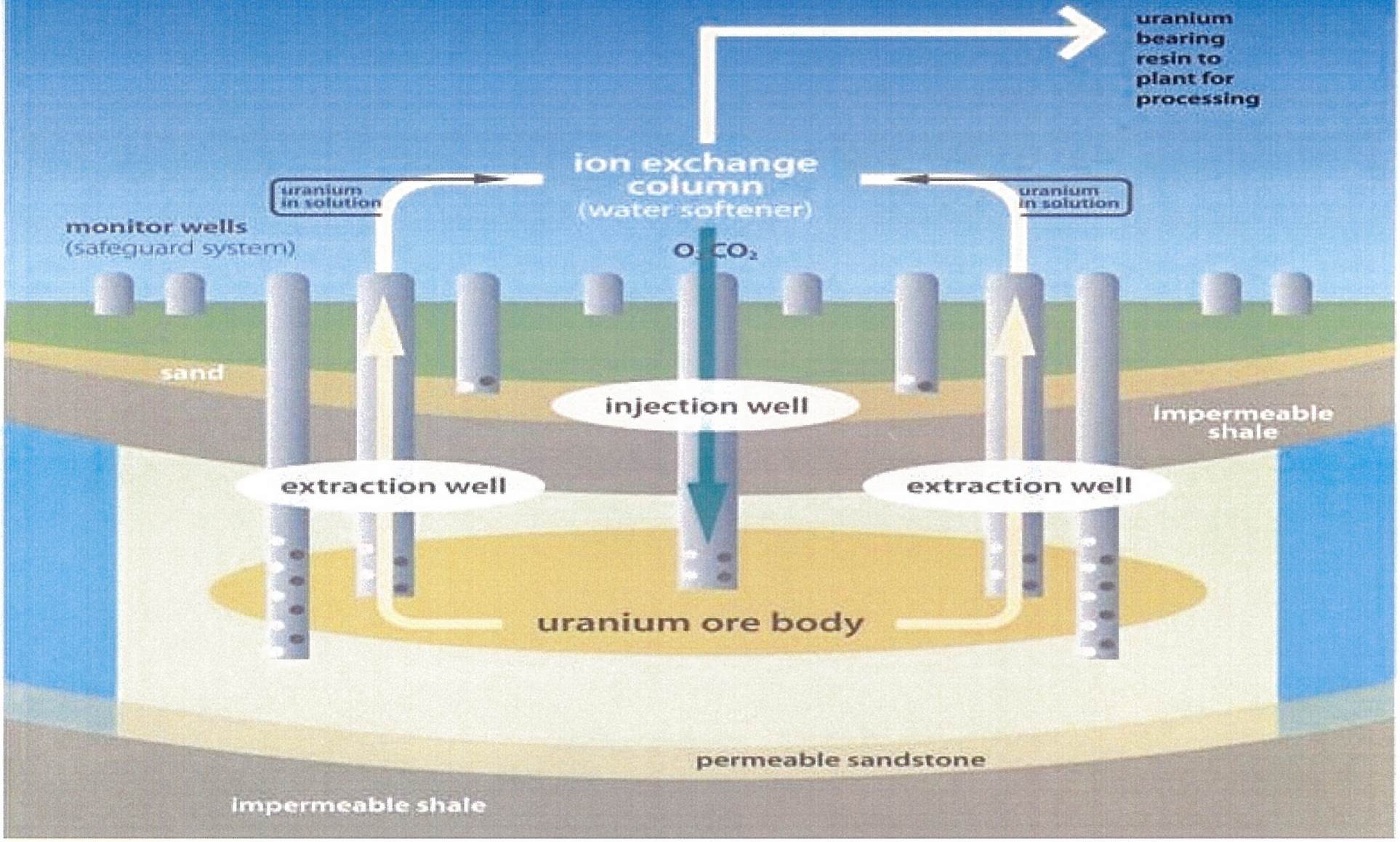
How Uranium Is Deposited (The Oxidation-Reduction Process)



"Uranium is one of many elements that exist naturally within the layers of earth"

The In-Situ Recovery Process

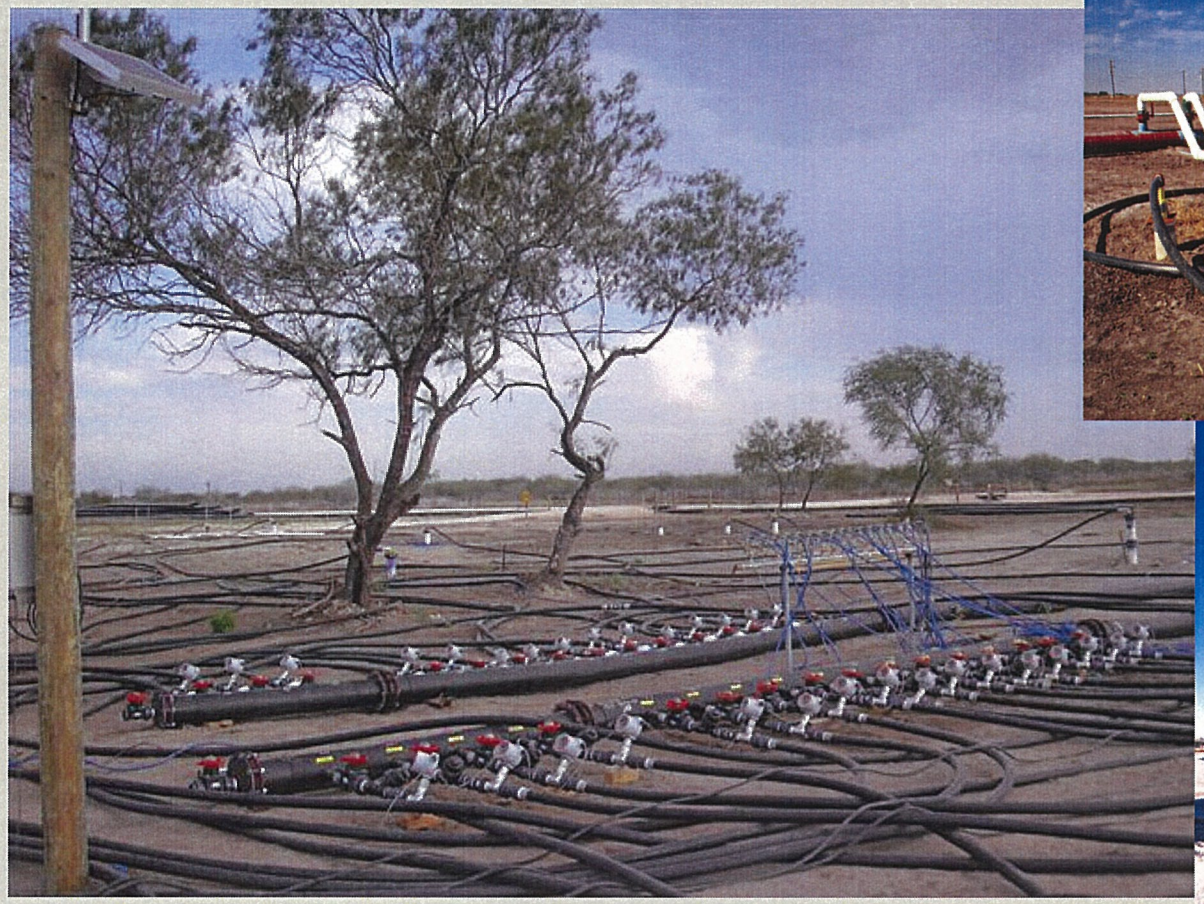


OXYGEN/CARBONATE INJECTION

"RUSTS" URANIUM4 to URANIUM6

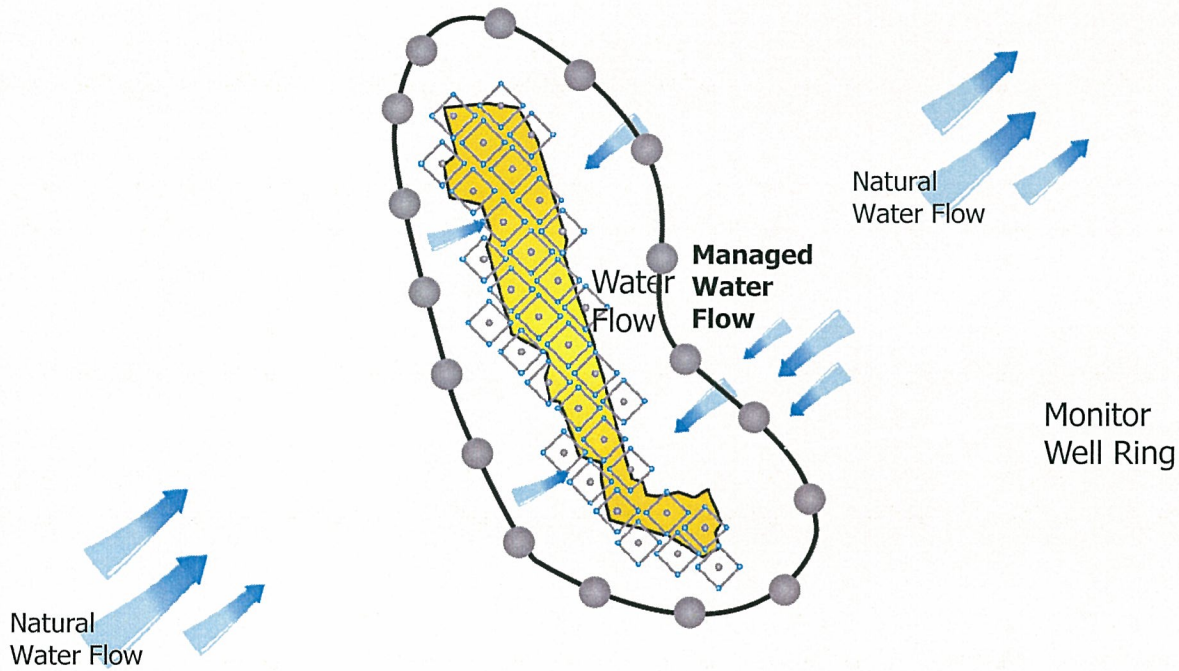
$$2UO_2 + O_2 \rightarrow 2UO_3$$

$$UO_3 + 2NaHCO_3 \rightarrow NA_2UO_2(CO_3)_2 + H_2O$$



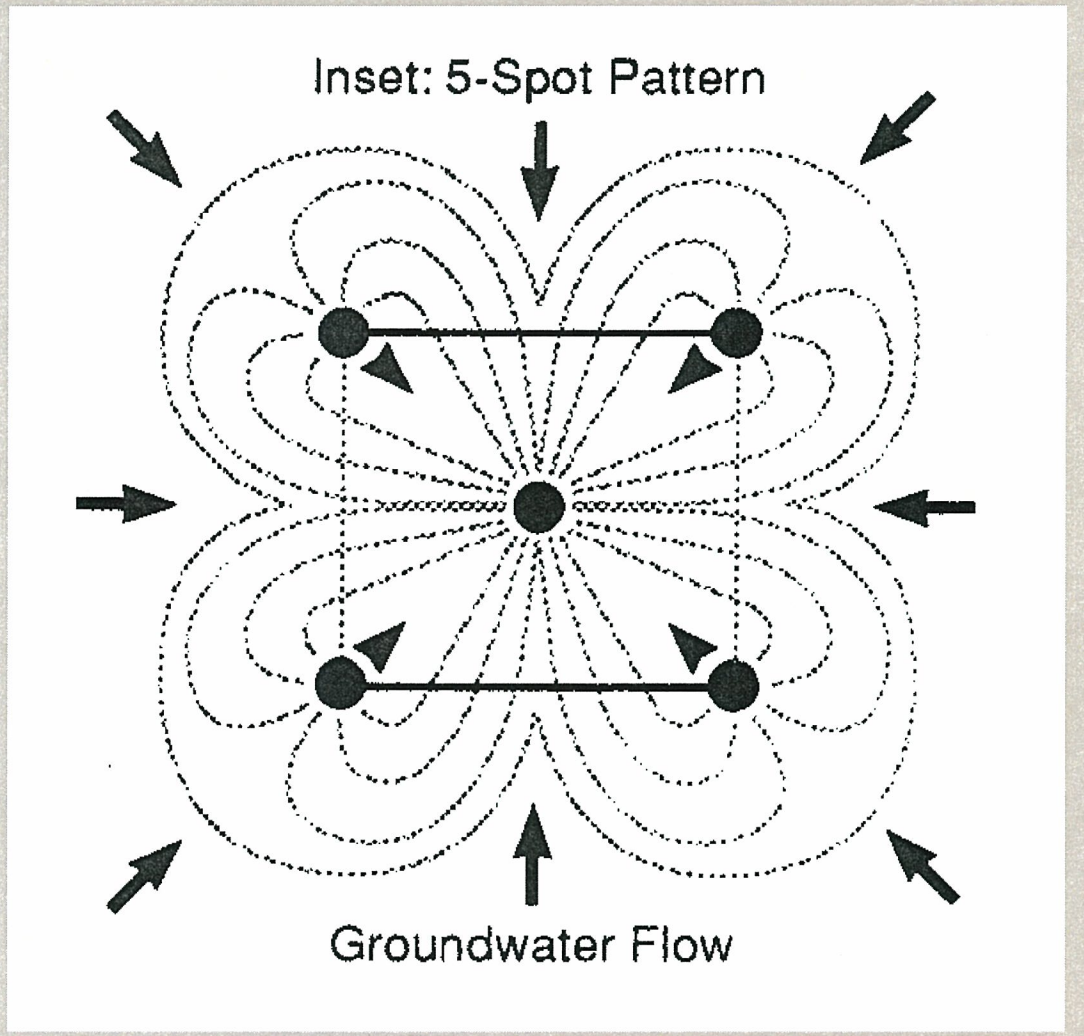
INTERA

ISR IS MANAGED AND PERFORMED LOCALLY

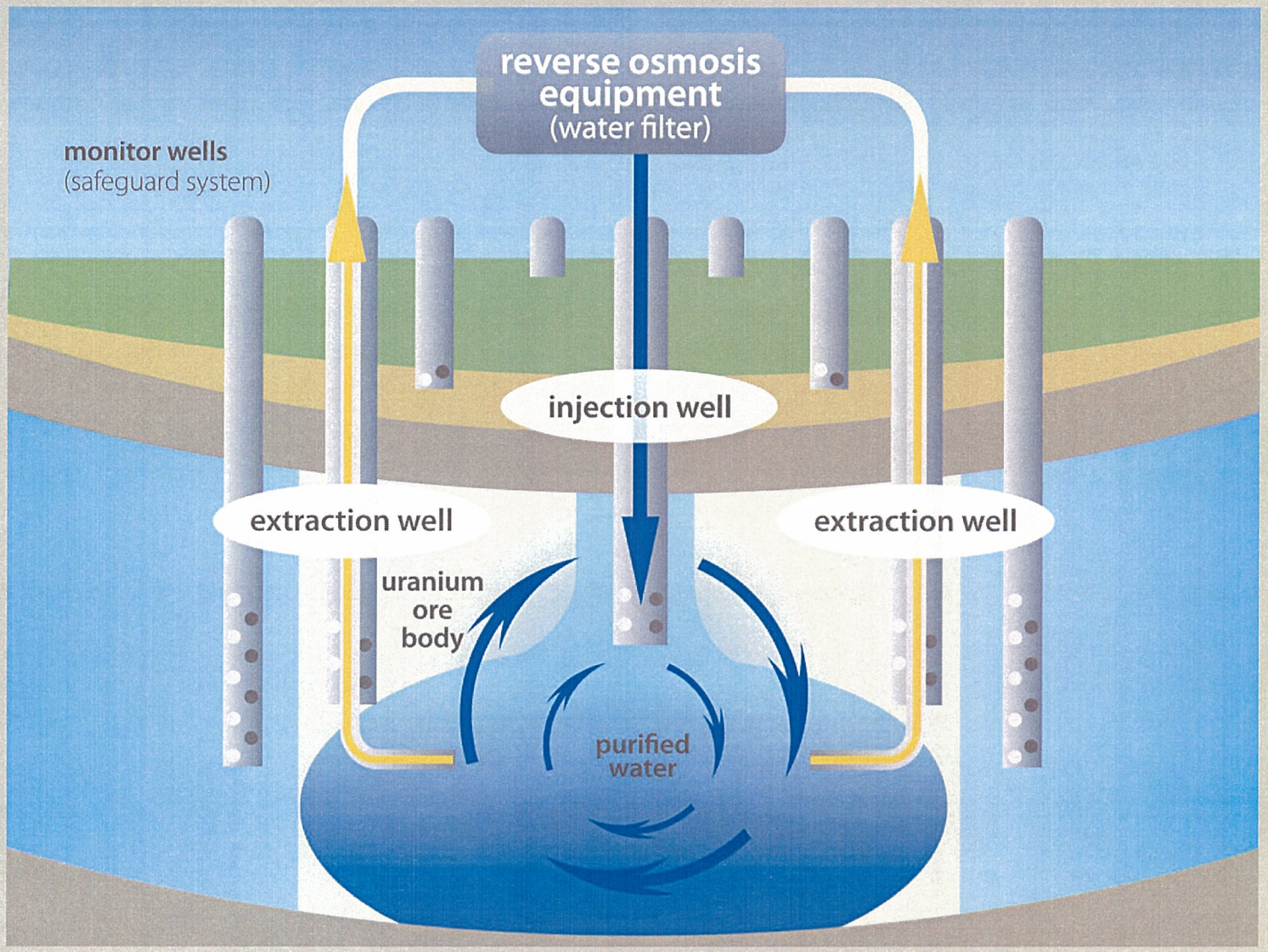


Monitor Wells to Injection Wells = 400'

OVER PRODUCTION RESPONSE



GROUNDWATER RESTORATION REQUIRED



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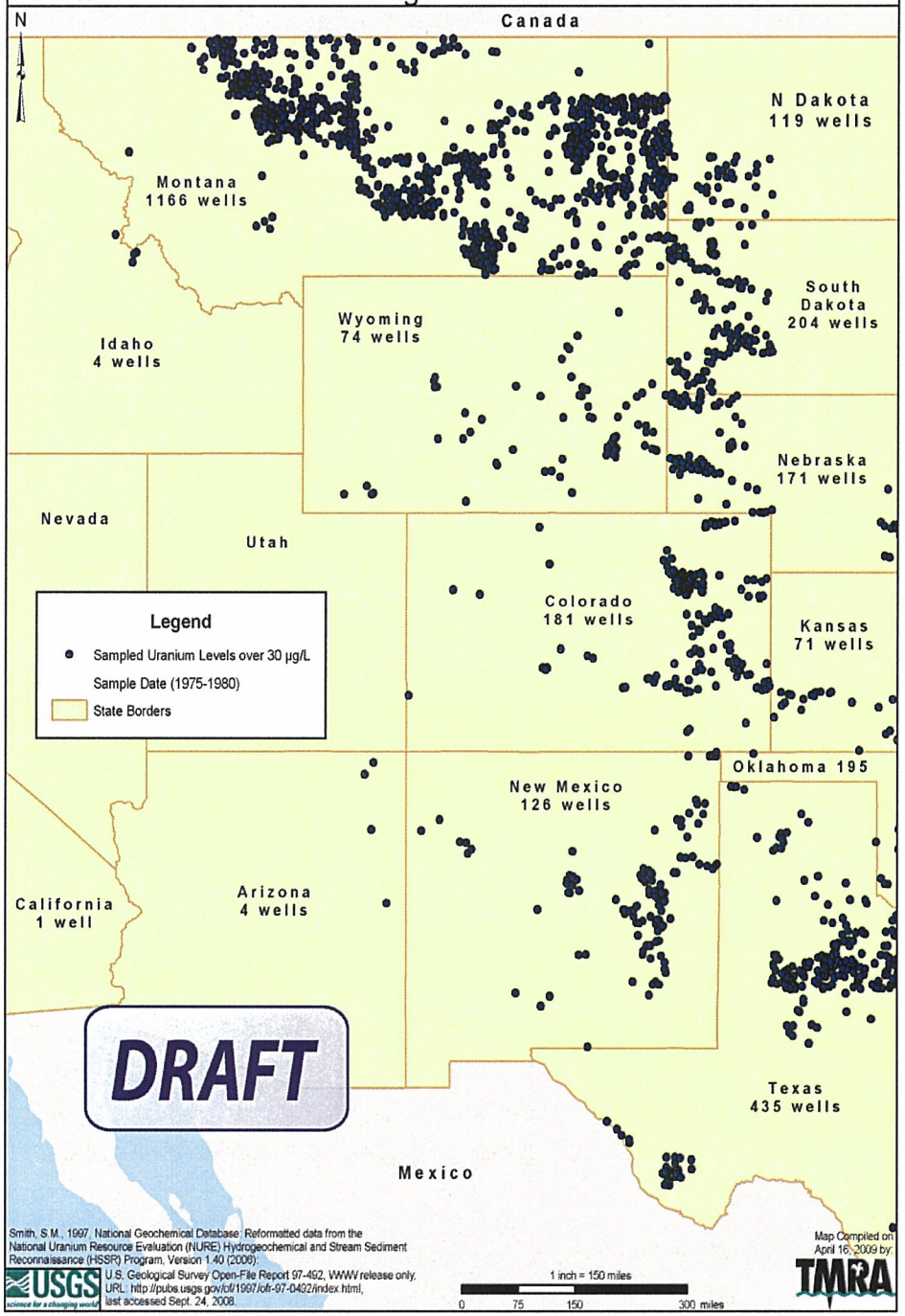
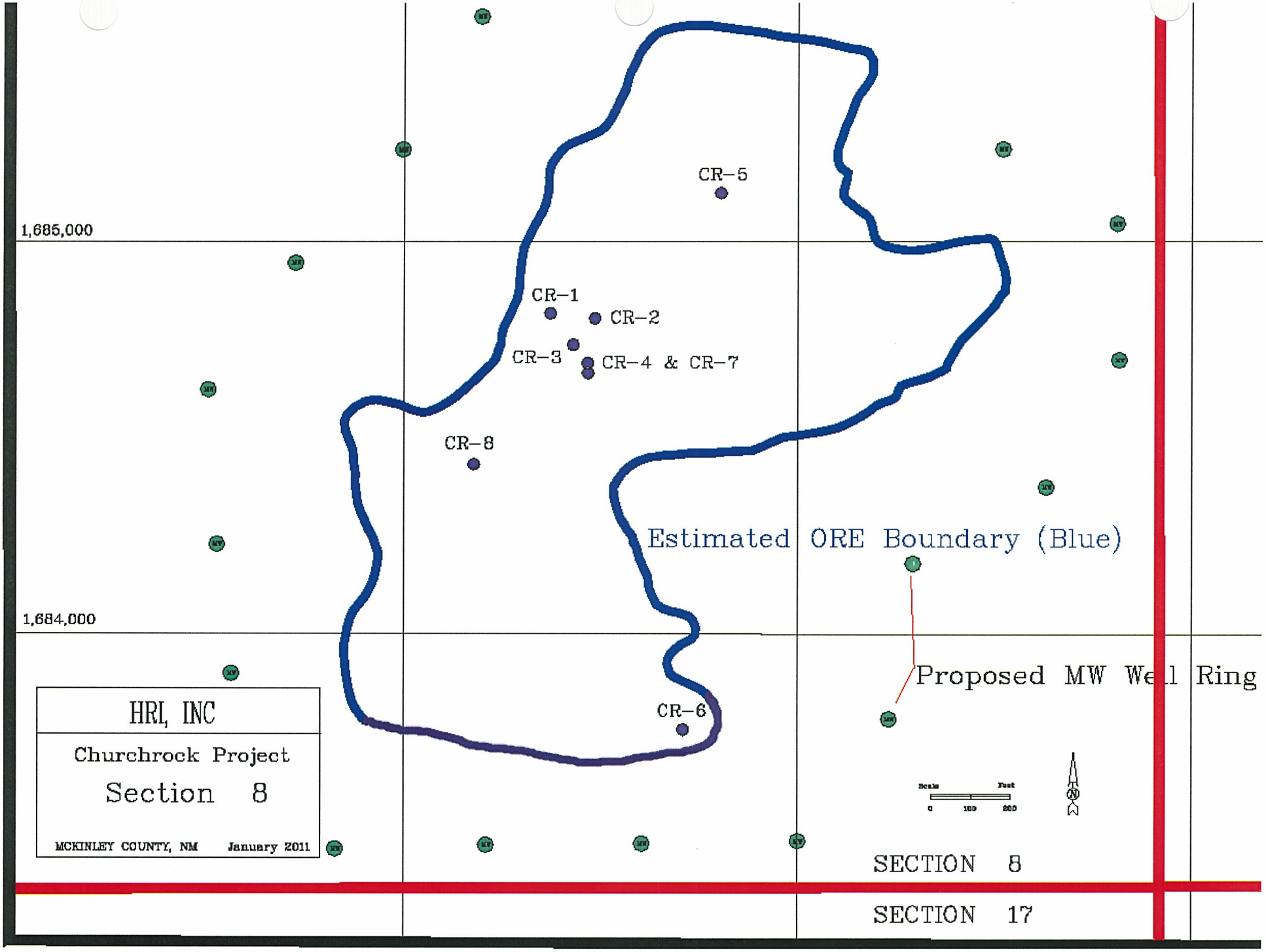
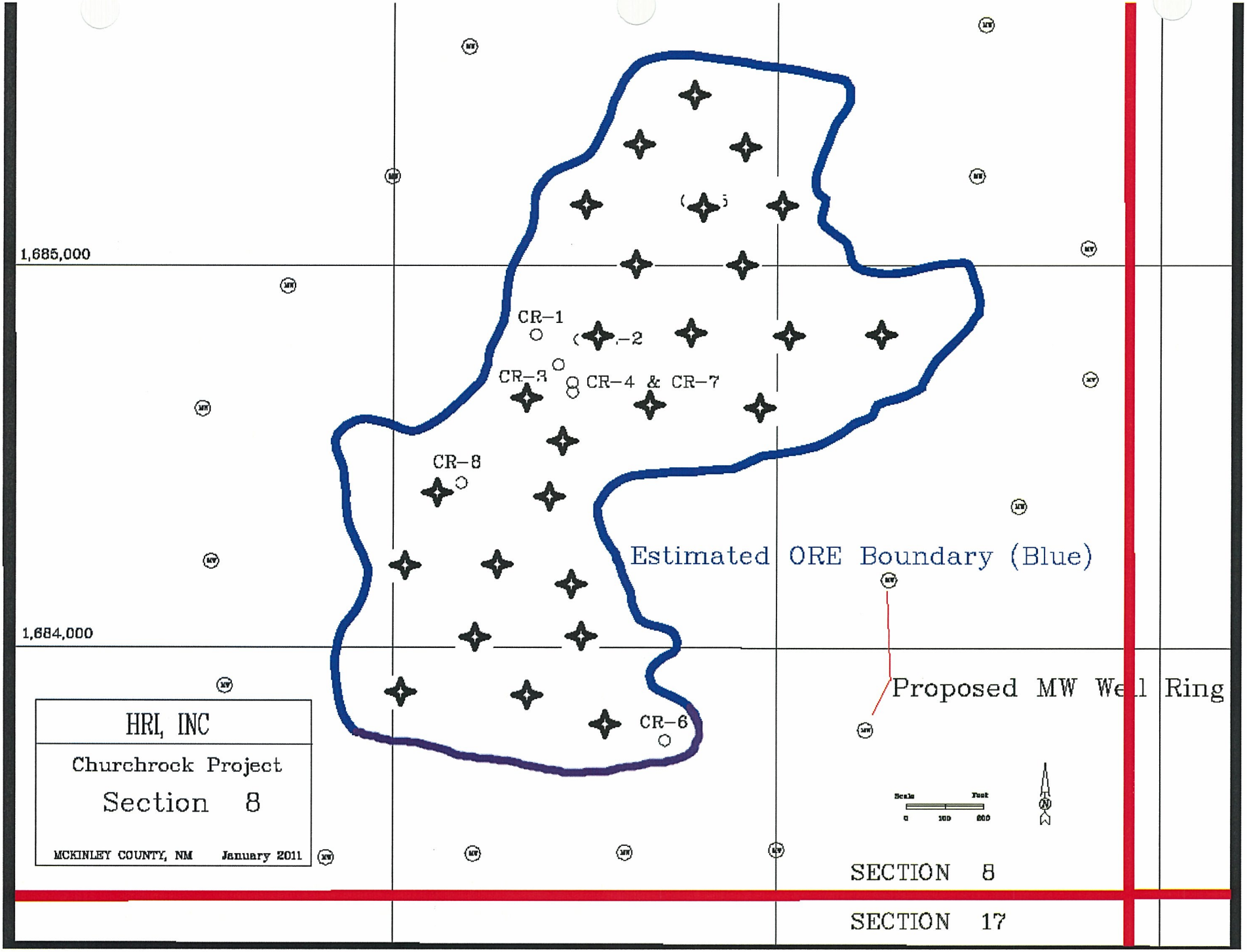
Historic Water Wells Showing Uranium Above the EPA Standard




1,685,000
1,684,000
CR-5
CR-1
CR-2
CR-3
CR-4 & CR-7
CR-8
CR-6
Estimated ORE Boundary (Blue)
Proposed MW Well Ring
HRI, INC
Churchrock Project
Section 8
MCKINLEY COUNTY, NM
January 2011
Scale
Feet
0
100
200
SECTION 8
SECTION 17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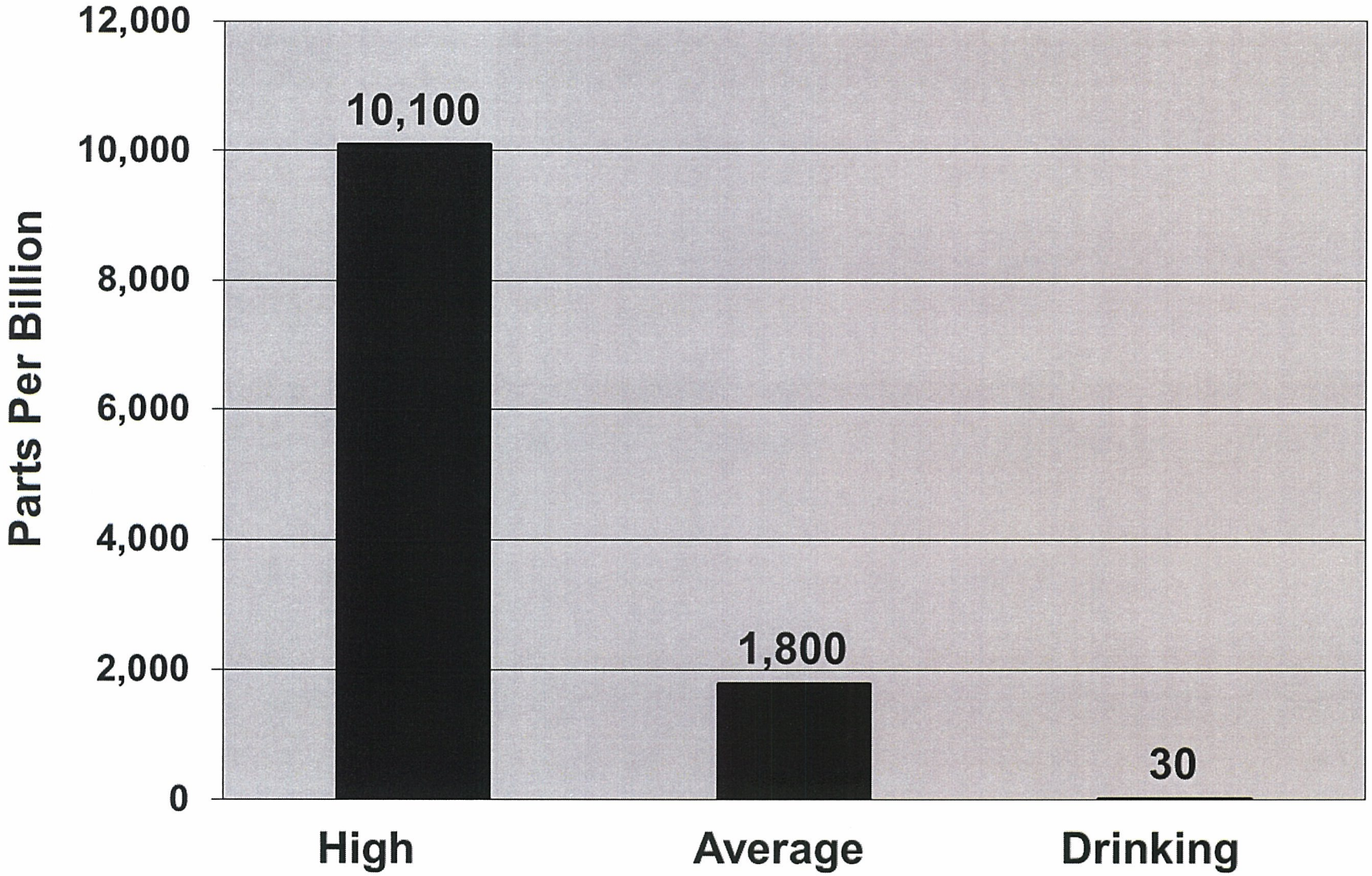
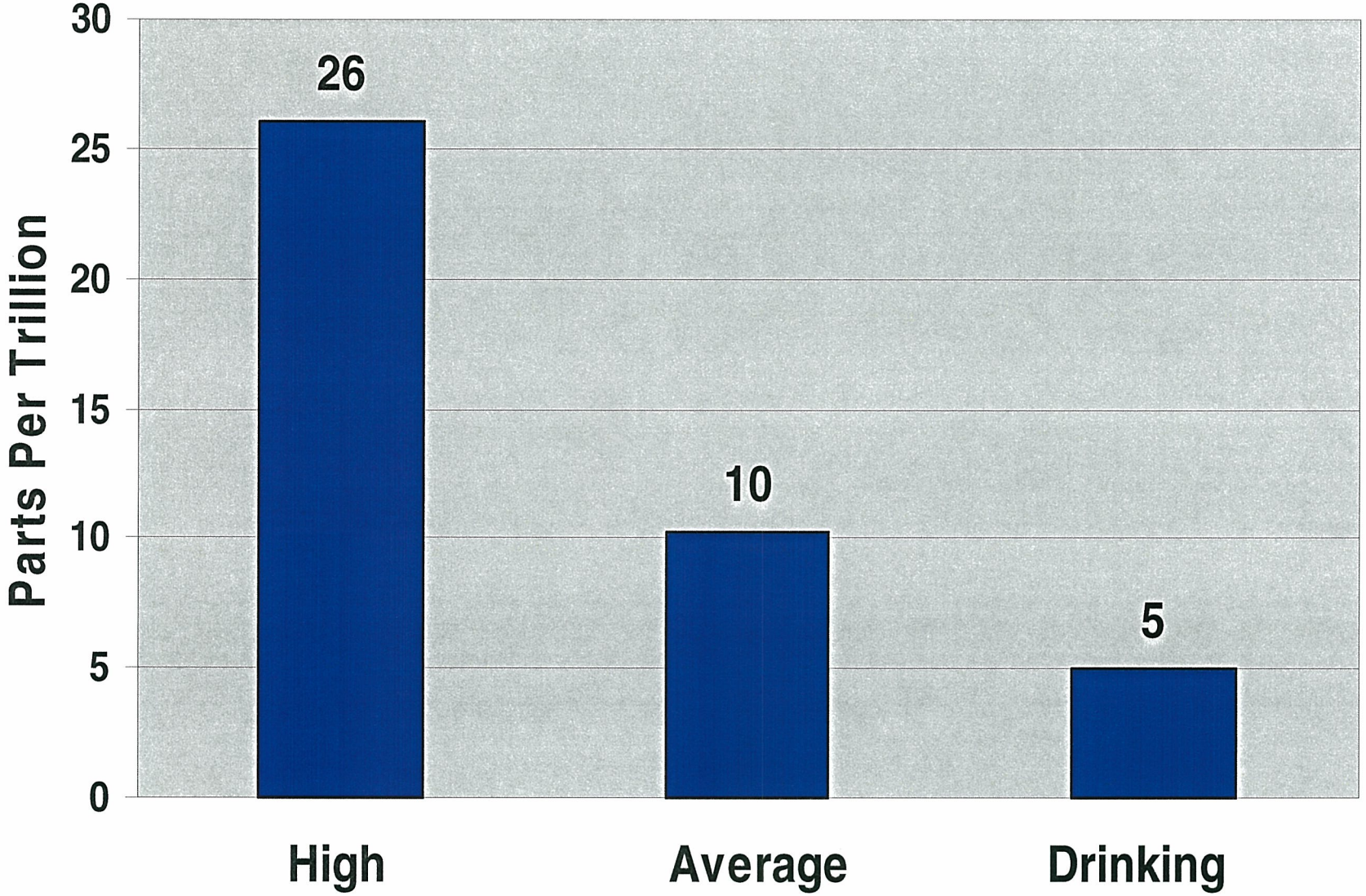
Section 8 Uranium Concentration*



*Final Environmental Impact Statement Crownpoint Uranium Project

Section 8 Radium Concentration*



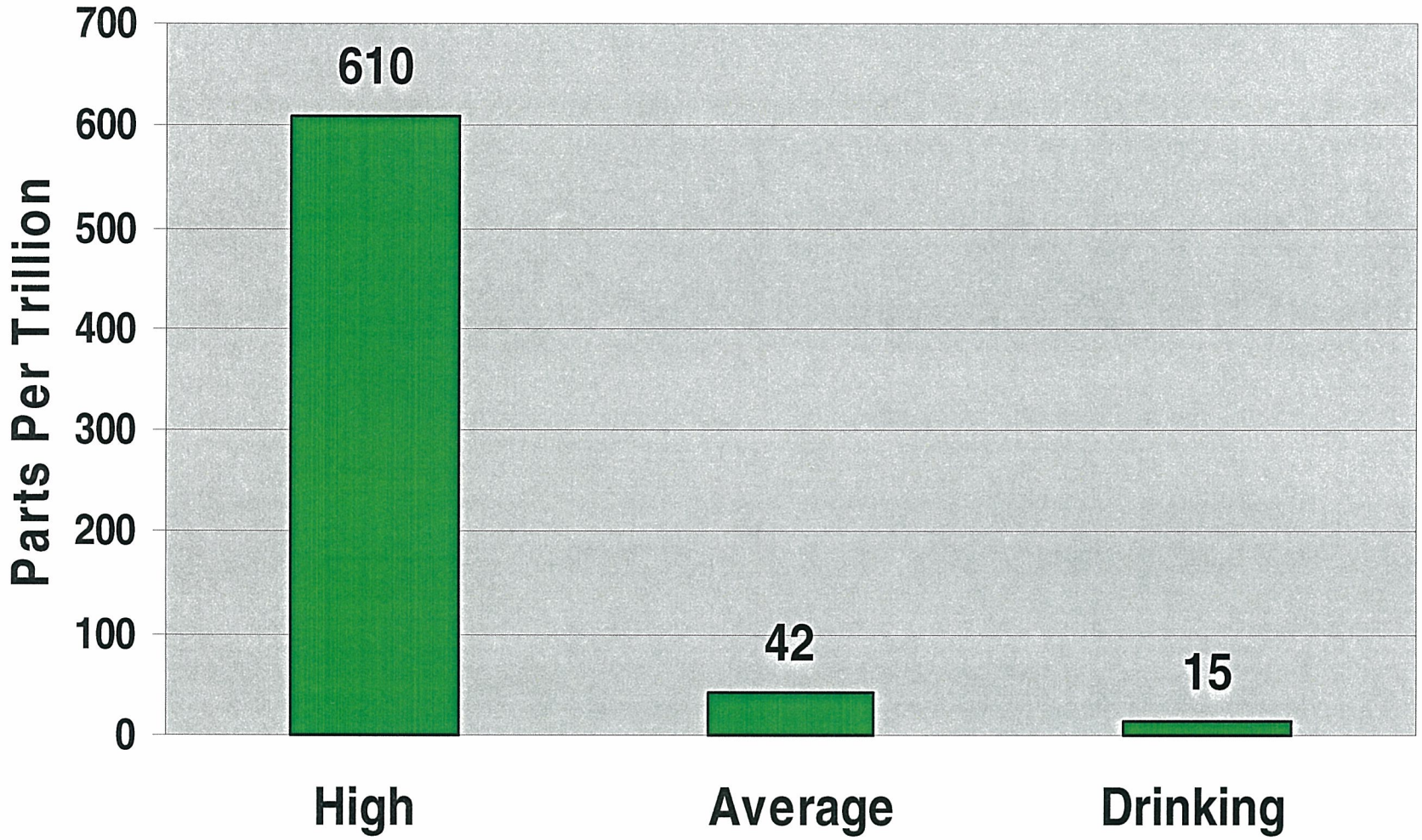
*Final Environmental Impact Statement Crownpoint Uranium Project

RANGE OF DATA IN THE ORE ZONE

- Baseline data is highly variable within the ore zone
- Groundwater within the ore zone contains constituents above the EPA Drinking Water Standard and should not be used for drinking
- Typically, the average concentrations of several constituents exceed drinking water standards
- The highest observed concentrations are often orders of magnitude higher than drinking water standards

INTERA

Crownpoint Unit 1 Gross α Radiation Concentration*



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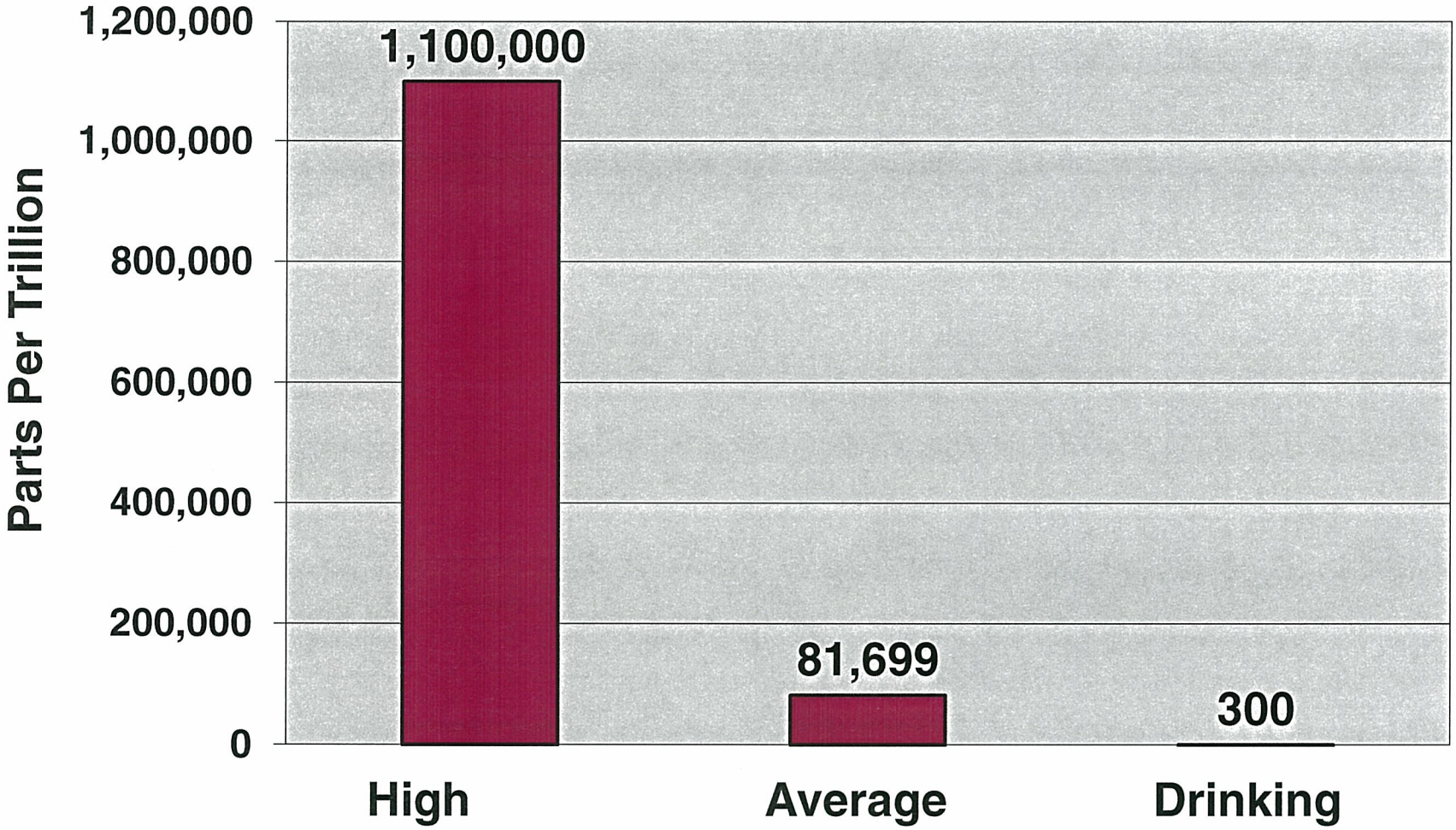
Crownpoint Unit 1 Radon Concentration*



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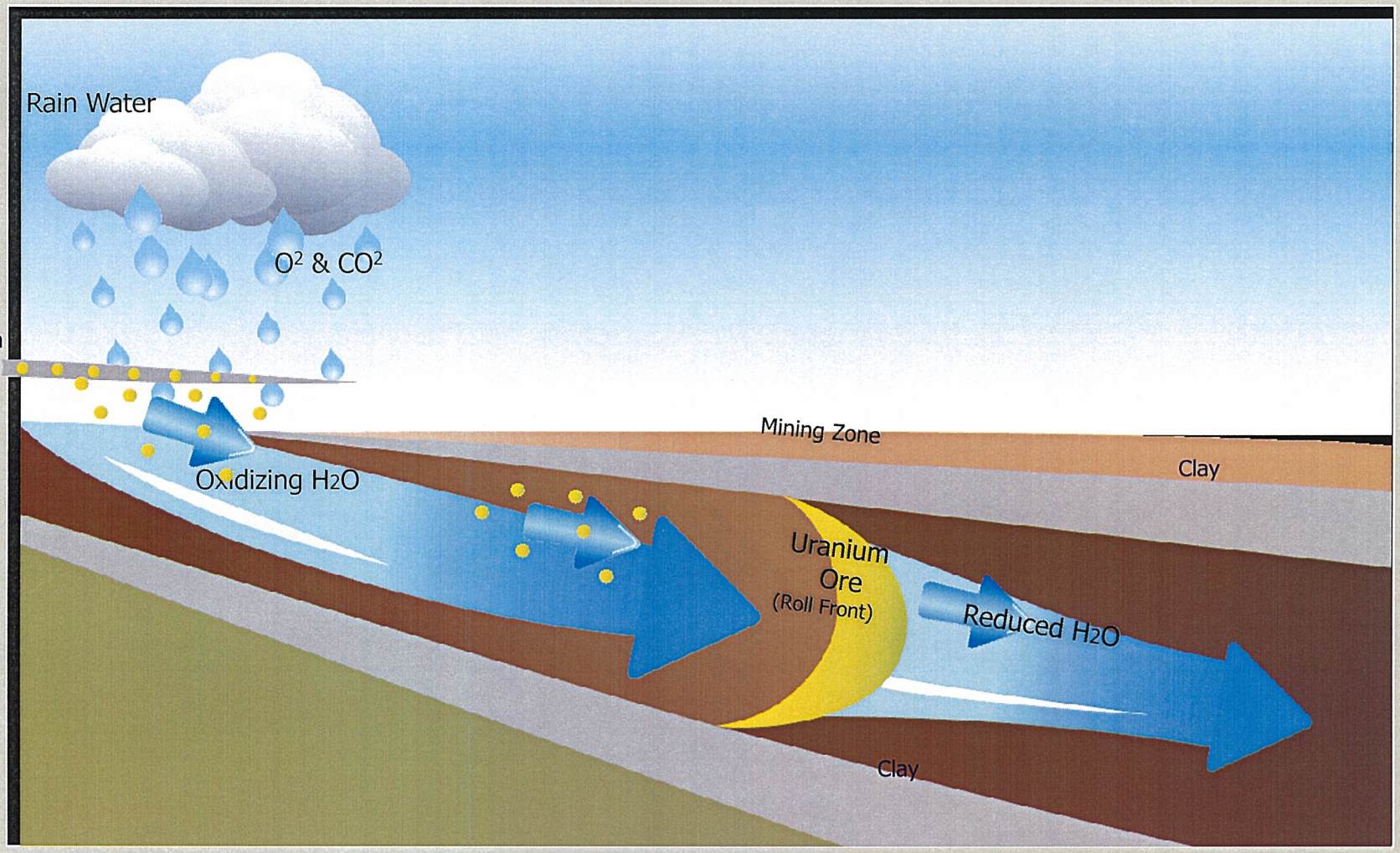
URANIUM ROLL FRONT DEPOSITION



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